

Thermo-Acoustic Convertor for Space Power, Phase II

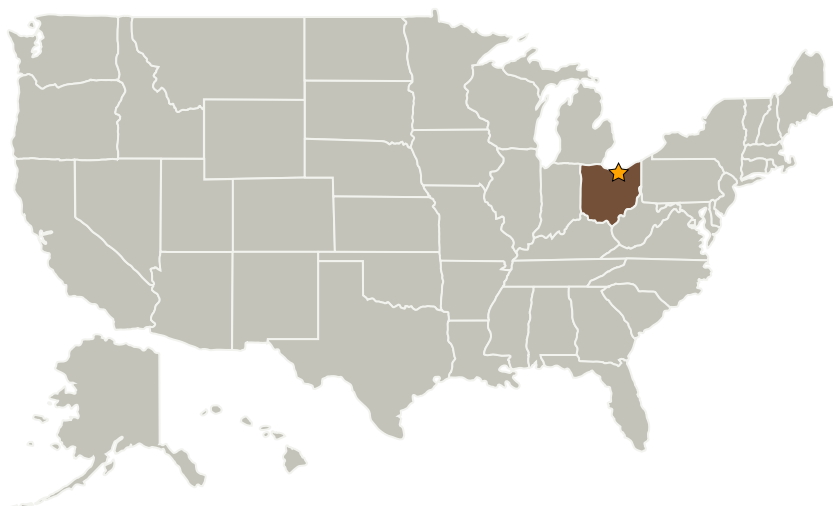
Completed Technology Project (2006 - 2008)



Project Introduction

In Phase Sunpower looked at Thermoacoustic Stirling Heat Engines (TASHEs). These ranged from a TASHE which was sized for the heat from a single General Purpose Heat Source (GPHS), to a larger unit sized for a Venus mission. We also looked at different types of cooler to produce both electrical power and sensor cooling for the Venus application. Computer projected performance and layout drawing were created for all the machines investigated. In Phase II we plan to fabricate, test, and develop the single-GPHS sized coaxial. TASHE designed in Phase I.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Glenn Research Center(GRC)	Lead Organization	NASA Center	Cleveland, Ohio
Sunpower, Inc.	Supporting Organization	Industry	Athens, Ohio

Primary U.S. Work Locations

Ohio



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Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Organizational Responsibility	1
Project Management	2
Technology Areas	2

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Glenn Research Center (GRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX03 Aerospace Power and Energy Storage
 - └ TX03.1 Power Generation and Energy Conversion
 - └ TX03.1.2 Heat Sources